

*Handwritten signature/initials*



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,412	07/21/2001	Itzhak Gurantz	9202	2398

24244      7590      05/26/2006

MICHAEL W LANDRY  
5098 SEACHASE STREET  
SAN DIEGO, CA 92130

EXAMINER
----------

CHOWDHURY, SUMAIYA A

ART UNIT	PAPER NUMBER
----------	--------------

2623

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/910,412	GURANTZ ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sumaiya A. Chowdhury	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 4/17/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 17-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/17/06 has been entered.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5, 8-9, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Li (4,633,309).

As for claims 1 and 22, Li teaches a network interface device (22 - Fig. 2) connected to building wiring, the building wiring comprising a point of entry (20 – Fig. 2) and a plurality of branches connected to terminal devices (26, 28, 30, & 32 – Fig. 2), for creating a signal distribution system (Fig. 2) comprising:

a first port (Referring to Fig. 2 the port where 20 intersects 22) connected to the point of entry side of a branch of the building wiring – col. 2, lines 15-20;

a second port (Referring to Fig. 2, the port where the incoming signal from the cable distribution is outputted from) connected to the terminal device side of a branch of the building wiring – col. 2, lines 18-;

a signal reflecting circuit (circuitry within 22 which reflects the 10.7 MHz signal) connected between the first and second port – col. 2, lines 55-65.

wherein a signal received at the second port is reflected out the second port and wherein all terminal devices connected to the network interface device receive the reflected signal – (The master decoder 26 sends a signal upstream which is reflected by the network interface device and is subsequently transmitted to the slave decoders (28, 30, 32) – col. 2, lines 55-67).

Considering claim 5, Li discloses a signal distribution network for transmitting modulated signals using building wiring containing a plurality of branches comprising

a network interface device (22 – Fig. 2) that reflects network signals originating in the building wiring back into all branches of the building wiring (The signal from (26 – Fig. 2) are **reflected** to (28, 30, 32 – Fig. 2). – col. 2, lines 55-65);

at least one signal splitter (splitter reflector 24 – Fig. 2); and

a plurality of terminal devices (28, 30, 32 – Fig. 2).

Considering claim 8, Li teaches the network interface device (22 – Fig. 2) is located at the point of entry of the building wiring – col. 2, lines 15-30.

Considering claim 9, Li teaches the network interface device is frequency dependent and reflects signals by reflecting a predetermined frequency band of signals – col. 2, lines 15-20, lines 60-67.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li as applied to claim 1 above, and further in view of Carhart (6622304).

Considering claim 4, Li fails to teach the claimed limitations.

In an analogous art, Carhart teaches the network interface device wherein the signal reflecting circuit comprises a splitter (31,32) with a first tap port (port connected to splitter (31) towards the bottom right splitter (32)), a second tap port (port connected to splitter (31) towards low pass filter (30)) and a common port (port connected to splitter (31) towards the top right splitter (32)), wherein the power at the first and second tap ports is coupled bi-directionally to the common port.

the common port connected to a branch of building wiring (The port connected to splitter (31) towards the top right splitter (32) is connected to splitter (32) which is connected to output port (35), which is attached to coaxial cable (23). – col. 9, lines 30-35 & lines 5-10);

a first filter (high pass filter 33 – Fig. 3) for separating bands of frequencies connected to the first tap port (High pass filter (33) is connected to splitter (32) which is connected to the first tap port in splitter (31). – col. 9, lines 51-56, col. 10, lines 8-12);

means (30-32) for reflecting signal energy connected to the first filter (col. 10, lines 6-18);

and a second filter (low pass filter 30 – Fig. 3) for separating band of frequencies connected between the second tap port and the point of entry (port 34 – Fig. 3; col. 9, lines 35-43).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Li's invention to include the above mentioned claim limitations, as taught by Carhart, for the advantage of allowing devices in a network to communicate with each other.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li as applied to claim 5 above, and further in view of Manchester (6144399).

Considering claim 7, Li fails to teach the building wiring is coaxial cable.

In an analogous art, Manchester teaches wherein the building wiring consists of coaxial cable (128, 138, 150 – Fig. 1; col. 3, line 50 – col. 4, line 15) in order to use wiring which is prevalent in existing buildings.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Li's invention to include the building wiring is coaxial cable, as taught by Manchester, for the advantage of using wiring which is prevalent in existing buildings.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li as applied to claim 1 above, and further in view of Boesch (5,969,582).

Considering claim 2, Li fails to disclose that the signal reflecting circuit comprises a parallel resonant circuit.

In an analogous art, Boesch discloses a system in which a parallel resonant circuit is implemented to reflect the energy. The resonant frequency of a parallel resonant circuit is the frequency at which the parallel impedance is maximum, thus allowing the signal to be effectively reflected. – col. 4, lines 63-67 & col. 5, lines 1-5.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Li's system to include a parallel resonant circuit in the signal reflecting circuit, as taught by Boesch, for the advantage of reflecting energy such that terminal devices could transmit/receive messages.

Art Unit: 2623

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li as applied to claim 1 above, and further in view of O'Shea (4,933,745).

Considering claim 3, Li fails to disclose the network interface device wherein the signal reflecting circuit comprises a series resonant circuit.

In an analogous art, O'Shea discloses a system in which a series resonant circuit is implemented to reflect the energy. The resonant frequency of a series resonant circuit is the frequency at which the series impedance is a minimum, thus allowing the signal to be effectively reflected. - col. 5, lines 1-10

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Li's system to include a series resonant circuit in the signal reflecting circuit, as taught by O'Shea, for the advantage of reflecting energy such that terminal devices could transmit/receive messages.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li as applied to claim 5 above, and further in view of Langlais (6,091,932)

Considering claim 6, Li fails to disclose the signal distribution network, wherein the signal modulation is orthogonal frequency division multiplexing.

In an analogous art, Langlais discloses a transmission system in which OFDM is employed to provide increased robustness against frequency selective fading or narrowband interference. - col. 10, lines 55-58.



It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Li's system to include orthogonal frequency division multiplexing as the desired type of signal modulation, as taught by Langlais, for the advantage of providing a more robust communication technique for distributing signals.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li as applied to claim 5 above, and further in view of Margulis (2001/0021998)

Considering claim 17, Li fails to disclose that the signal distribution network uses code division multiplex for signal modulation.

In an analogous art, Margulis discloses a system in which code division multiplex is implemented – paragraph 0055, 0063, and 0070.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Li's system to include code division multiplex, as taught by Margulis, for the advantage of providing high user capacity and protection from interference from other signals.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li and Langlais as applied to claim 6 above, and further in view of Horton (6,788,707).

Considering claim 18, Li and Langlais fail to disclose that the terminal devices communicate with each other using time division duplex protocol.

In an analogous art, Horton discloses a cable network in which Time Division Multiple Access (TDMA) is implemented to facilitate communication in both the upstream and downstream direction – col. 4, lines 9-16.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Li and Langlais' system to include TDMA, as taught by Horton, for the advantage of facilitating communications between devices wherein a single frequency supports simultaneous data channels.

11. Claims 19 & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li as applied to claim 1/5 above, and further in view of Zelenz (4222066).

As for claim 19, Li fails to disclose wherein the signal reflecting circuit comprises an impedance mismatch.

In an analogous art, Zelenz discloses wherein the signal reflecting circuit (Fig. 3) comprises an impedance mismatch – col. 3, lines 27-32.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Li's invention to include wherein the signal reflecting circuit comprises an impedance mismatch, as taught by Zelenz, for the advantage of reflecting almost all of the incident power.

Claims 21 contain the limitations of claim 19 and is analyzed as previously discussed with respect to that claim.

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li and Carhart as applied to claim 4 above, and further in view of Zelenz.

Claims 20 contain the limitations of claim 19 and is analyzed as previously discussed with respect to that claim.

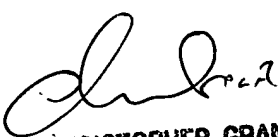
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sumaiya A. Chowdhury whose telephone number is (571) 272-8567. The examiner can normally be reached on Mon-Fri, 9-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571) 272-7292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAC



CHRISTOPHER GRANT  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800